

CLAIMS

1. An organic lumen cleaning agent comprising:

5 a gas-liquid mixture obtained by mixing at least a gas component and a liquid component.

2. The organic lumen cleaning agent of Claim 1, wherein

10 the gas-liquid mixture is in a vapor state that the liquid component floats in the gas component.

3. The organic lumen cleaning agent of Claim 1, wherein

the gas-liquid mixture is in a foam state that the gas component is encapsulated in the liquid component.

15 4. The organic lumen cleaning agent of Claim 1, wherein

the gas-liquid mixture has a property of fluidizing or dispersing contents of an organic lumen.

5. The organic lumen cleaning agent of Claim 1, wherein

20 the gas component of the gas-liquid mixture is a gas including at least one of air, oxygen, nitrogen, carbon dioxide, argon, and helium, and

the liquid component of the gas-liquid mixture is a liquid of any of an aqueous solution, an oil-based liquid, a water- and oil-based liquid, and a mixed solution of a water-based material and an oil-based material.

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6. The organic lumen cleaning agent of Claim 1, wherein

a solute component of the gas-liquid mixture is at least one selected from the group

of: celluloses; uronic acids; starches and starch-derived products; dextrans; lactobacillary yogurt and yogurt-derived products; mucopolysaccharides; rubbers; polyvinyl alcohol; polyvinyl pyrrolidone; sugar ester; polyglycerol ester; polyethylene glycol; glycerin; kudzu; seaweeds and seaweeds-derived products; natural oils and synthetic oils; 5 detergents; herbal aromatic substances; natural bactericides and synthetic bactericides; deodorizers; oligosaccharide and monosaccharides; electrolytes; inorganic alkalis; and carboxylic acids.

7. The organic lumen cleaning agent of Claim 1, wherein

10 a raw material of the gas-liquid mixture includes a CO₂ generating agent and at least one of bacteria, bacteria-derived products; and carboxylic acids.

8. The organic lumen cleaning agent of Claim 1, wherein

15 the gas-liquid mixture contains at least one of a biological origin and a physiological modifier.

9. An organic lumen cleaning apparatus comprising:

insertion means to be inserted into an organic lumen; and

20 cleaning agent means, which stores an organic lumen cleaning agent composed of a gas-liquid mixture obtained by mixing at least a gas component and a liquid component or which generates an organic lumen cleaning agent from a raw material component of the gas-liquid mixture, for supplying the organic lumen cleaning agent to the insertion means.

10. The organic lumen cleaning apparatus of Claim 9, further comprising:

25 discharge means connected to the insertion means for recovering contents of the organic lumen which is excreted from the organic lumen.

11. The organic lumen cleaning apparatus of Claim 9, further comprising:

volume control means connected to the connection means for controlling a supply amount of the organic lumen cleaning agent.

5 12. The organic lumen cleaning apparatus of Claim 9, wherein

the cleaning agent means includes a flexible container, and a division wall which is provided within the container, which defines the inside of the container into plural, and which is capable of being broken.

10 13. The organic lumen cleaning apparatus of Claim 9, wherein

the gas-liquid mixture is in a foam state that the gas component is encapsulated in the liquid component.

14. An organic lumen cleaning method using:

15 insertion means to be inserted into an organic lumen; and

cleaning agent means, which stores an organic lumen cleaning agent composed of a gas-liquid mixture obtained by mixing at least a gas component and a liquid component or which generates an organic lumen cleaning agent from a raw material component of the gas-liquid mixture, for supplying the organic lumen cleaning agent to the insertion means,

20 the method comprising the steps of:

inserting the insertion means into an organic lumen;

injecting the organic lumen cleaning agent from the cleaning agent means through the insertion means.

25 15. The organic lumen cleaning method of Claim 14, further comprising the step of:

recovering contents of the organic lumen which is excreted from the organic lumen to discharge means connected to the insertion means after cleaning by injecting the organic

lumen cleaning agent into the organic lumen.

16. The organic lumen cleaning method of Claim 14, wherein

a supply amount of the organic lumen cleaning agent is controlled by volume

5 control means connected to the connection means.

17. The organic lumen cleaning method of Claim 14, wherein

the gas-liquid mixture is in a foam state that the gas component is encapsulated in the liquid component.

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18. The organic lumen cleaning method of Claim 17, further comprising the step of:

administering an antifoaming agent to the organic lumen in a cleaning process after injecting the organic lumen cleaning agent to the organic lumen.